

Title (en)
Lithium-ion secondary battery

Title (de)
Lithiumionsekundärbatterie

Title (fr)
Batterie secondaire au lithium-ion

Publication
EP 2003716 B1 20121114 (EN)

Application
EP 08153469 A 20080327

Priority
JP 2007153472 A 20070611

Abstract (en)
[origin: EP2003716A1] A lithium-ion secondary battery is provided where a current collecting disk and a current collector foil are joined to each other securely while damage of the foil is suppressed. The lithium-ion secondary battery is provided with a winding group obtained by winding a positive electrode plate and a negative electrode plate via a separator. An uncoated area of the positive electrode current collector foil and an uncoated area of the negative electrode current collector foil project at an upper portion and a lower portion of the winding group, respectively. The current collecting disk (7) has projecting ridge portions on a face thereof opposite to the winding group and flat face portions facing the winding group at positions corresponding to the projecting ridge portions. The projecting ridge portions are formed radially. The end portion of the positive electrode mixture non-application portion and the end portion of the negative electrode mixture non-application portion are caused to abut on the flat face portions of the current collecting disks (7) and joining is performed by irradiating the projecting ridge portions with laser beam.

IPC 8 full level
H01M 4/13 (2010.01); **H01M 10/04** (2006.01); **H01M 10/0525** (2010.01); **H01M 10/0587** (2010.01); **H01M 50/533** (2021.01); **H01M 50/534** (2021.01); **H01M 50/536** (2021.01); **H01M 50/538** (2021.01); **H01M 50/541** (2021.01)

CPC (source: EP US)
H01M 10/0431 (2013.01 - EP US); **H01M 10/0525** (2013.01 - EP US); **H01M 10/0587** (2013.01 - EP US); **H01M 50/533** (2021.01 - EP US); **H01M 50/534** (2021.01 - EP US); **H01M 50/536** (2021.01 - EP US); **H01M 50/538** (2021.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP); **Y02T 10/70** (2013.01 - US)

Cited by
EP2061106A1; EP2472641A1; EP2618350A4; EP4250415A1; US8568916B2

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DE FR GB

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EP 2003716 A1 20081217; **EP 2003716 B1 20121114**; CN 101325248 A 20081217; CN 101325248 B 20101201; JP 2008305731 A 20081218; JP 4444989 B2 20100331; US 2008305393 A1 20081211; US 7989107 B2 20110802

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